



T E L L I T E

1986

COOPS SATELLITE DIGEST
P O BOX 100858
FT LAUDERDALE FL 3331

FL 3331

PREMIER EDITION

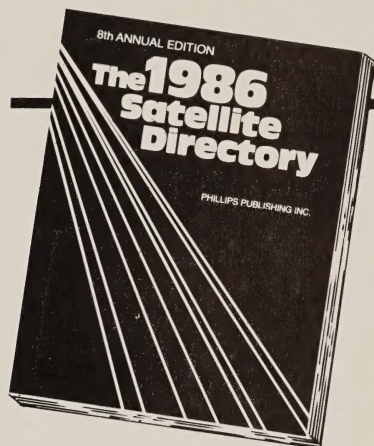
- Ku-band takes off
- Satellite News Gathering
- Broadcasters and Satellites



FROM PHILLIPS PUBLISHING!



Examine the new **1986 SATELLITE DIRECTORY** without the slightest risk.



**SAVE NOW—BUT NOT FOR
LONG—UNDER THIS SPECIAL
PRE-PUBLICATION OFFER!**

- *All new—more than 16,000 updated, expanded, in-depth listings!*
- *8½" x 11"—900 pages!*
- *Today's key industry issues—plus what's just ahead!*
- *Facts and figures spring to life in powerful tables, charts, graphs!*
- *Every fact and figure you need from every corner of the industry!*
- *Eliminates guesswork. Saves your time. Every name, address, phone number—at your fingertips!*
- *A profit-packed, decision-making tool designed to be used. Fast-finding cross-indexes lead you to what you need—at once!*

BIG \$40 SAVING—JUST FOR AGREEING TO EVALUATE THE NEW 1986 SATELLITE DIRECTORY!

Please send _____ copies of the new, greatly-expanded **1986 Satellite Directory** the moment it's published. I understand I'm entitled to a \$40 per copy pre-publication saving. The price is only \$157 now.

There's absolutely no risk. I'll examine the **Directory** for 30 days. And if the **Directory** is not for me, I'll return it for a full, prompt refund—without question.

☐ Check enclosed: \$ _____. ☐ Company P.O. #: _____

☐ Please bill me. You'll ship the **Directory** the moment you receive payment.

☐ I've asked to examine five or more **Directories**. That earns me an extra 30% quantity discount. So it's just \$107 a copy!

☐ Charge my credit card,

☐ VISA

☐ MasterCard

☐ AMEX

Card number: _____

Expiration date: _____

MC Interbank No.: _____

Signature: _____

Please add \$8.50 per copy for postage and handling. Or \$25.00 for orders outside the U.S. or Canada.

Name _____

Title _____

Organization _____

Address _____

City _____ State _____ Zip _____

Phone () _____

SD 650

**PLEASE COMPLETE AND MAIL THE ENCLOSED
NO-RISK REQUEST FORM TODAY**

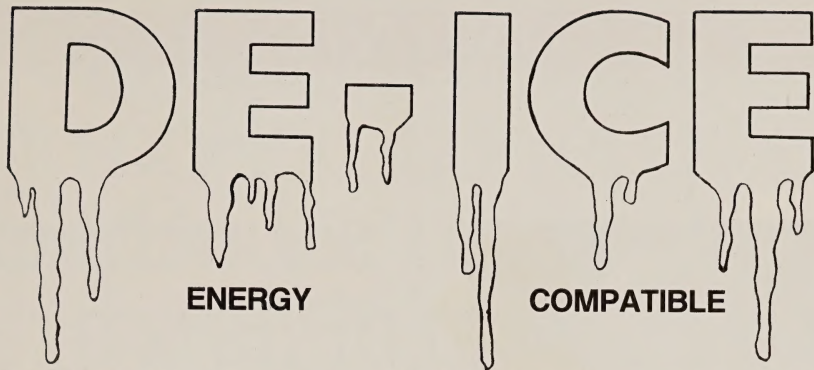
**FOR FAST ACTION
PHONE—TOLL FREE—**

800-558-8851



PHILLIPS PUBLISHING • 7811 MONTROSE ROAD • POTOMAC, MARYLAND 20854





DOWN TIME

ENERGY

INEXPENSIVE

COMPATIBLE

ESTHETICS

ANTENNA DE-ICING C BAND AND KU BAND



Down Time

No down time or signal loss due to ice or snow or installation of de-icing equipment.

Energy

Only 20 amp 120 volt circuit required at the antenna (Minimum load on uninterrupted power system) heated with tremendous savings in energy.

Inexpensive

Simple to install using 1250 watt/100 cfm heater.

Compatible

Can be installed on all metal and fiberglass antennas.

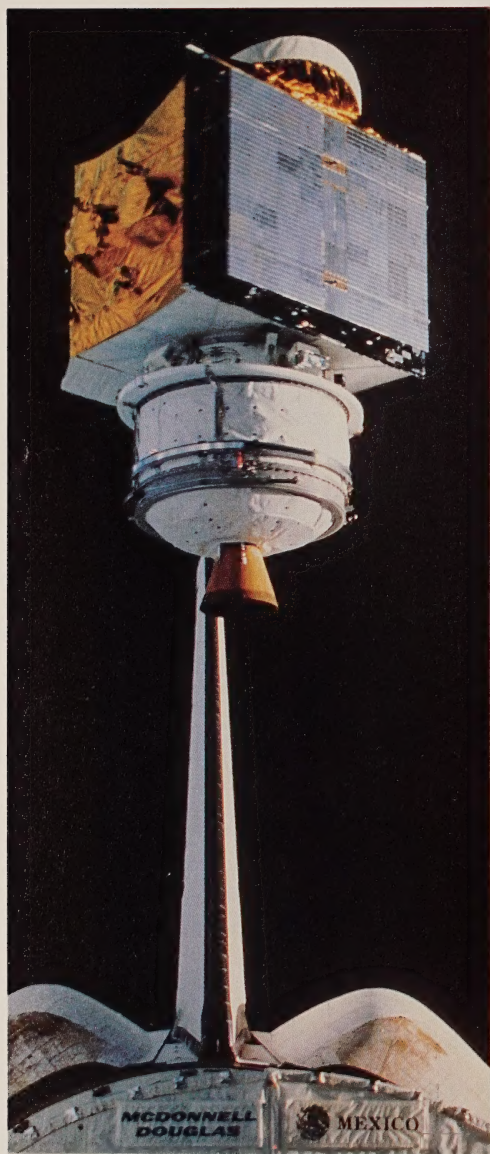
Esthetics

Improves the appearance of earth station antennas. You can add your logo.

**U.S. PATENT NO. 4,368,471
FOR ADDITIONAL INFORMATION REGARDING DE-ICING
SYSTEMS**

**CALL (714) 683-0930 OR WRITE
W.B. WALTON ENTERPRISES, INC.
P.O. BOX 974, RIVERSIDE, CA 92502**

TABLE OF CONTENTS



This month's cover shot is of the deployment of RCA Americom's K-2 satellite from the space shuttle Atlantis on November 28th. Shown are the spacecraft attached to the new PAM-D2 upper stage. Photo: courtesy NASA.

- 6 A Letter From the Publisher**
A welcome to readers of the premier edition.
- 7 News**
Breaking stories.
- 8 Calendar**
Up and coming events of interest to the industry.
- 12 RCA's Ku-band Gamble Pays Off**
The launching of K-2 and K-1.
- 14 TCI Unveils Plan to Market Programming to TVRO Consumers**
A new satellite-direct programming package from the nation's largest cable operator.
- 16 The Satellite News Gathering Arena**
The current status of satellite news gathering.
- 19 KPLR Moves Full Force into Satellite Broadcasting**
A local television station's experience.
- 22 Video Via Satellite: The Market Takes Off**
An industry perspective.
- 29 Contracts**
Contracts awarded and received.
- 30 Worldwide Commercial Communications Satellite Market**
Projected space segment growth through the end of the century.
- 33 Technology**
New products for the industry.
- 34 Editorial**
The editor's views on the industry.

Volume 1 Issue 1

Via Satellite is published monthly by Satellite Broadcasting Inc. 7340 E. Caley, Suite 380, Englewood, CO 80111. Copyright 1985 by Satellite Broadcasting Inc. All Rights Reserved. Application to Mail at Second-Class Postage is Pending at Englewood, CO and additional offices. Subscription rates: \$19.95/year, \$34.95/2 years, payable in U.S. funds only.

POSTMASTER: Please send address corrections to Via Satellite Magazine P.O. Box 2220, Englewood, CO 80150.

From fast-breaking news to on-location events, SkyBridge™ puts you on the air in minutes.



Nothing can land your story on the air faster.

News and special events don't always pick convenient places to happen. But somehow you have to get to those places, set up, and be on the air fast.

With COMSAT General's SkyBridge you can. SkyBridge is a transportable satellite broadcast service that enables you to transmit to your studio facility from remote locations anywhere in the continental U.S.

Live material can be transmitted instantly. Stories can be edited on the spot and then transmitted on the spot.

You can't do things any faster.

It puts your station in the driver's seat.

The cornerstone of SkyBridge is a compact, self-contained satellite broadcast vehicle. Its 2.4 meter antenna can be operated from inside the vehicle and folds down onto the top of the van when not in use. And since SkyBridge provides you with Ku-band satellite time, you can transmit from remote locations or the middle of a city regardless of the distance back to your studio. Wherever events are happening, you'll be there with SkyBridge.

For a very reasonable monthly lease, SkyBridge puts your station in the driver's seat.

For complete details on SkyBridge, call Judy Blake at (202) 863-7326.



**COMSAT GENERAL
CORPORATION**

950 L'Enfant Plaza, S.W., Washington, D.C. 20024

A LETTER FROM THE PUBLISHER

Dear Reader:

Welcome to the pages of **Via Satellite** magazine. Via Satellite will be published monthly and distributed internationally. We are a trade journal designed to serve the satellite broadcasting industry.

Satellites are fast becoming the backbone for distribution of video and audio programming and data. There is no better way to deliver information to the masses. When you need to get it from here to everywhere, now, satellites are the cost-effective answer.

The transition to satellite distribution started when the cable television industry began delivering their programming to local cable systems via satellite. This allowed them the ability to provide better service with more programming to their subscribers. Then came the TVRO industry. Innovative entrepreneurs found ways to bring the cost of receive-only C-band earth stations to prices which were affordable to home-owners. Most home TVRO's have been installed in rural areas where cable is unavailable and direct-reception is the only way that these viewers can receive satellite programming. To date, installations of home earth stations number approximately one and a half million and growing.

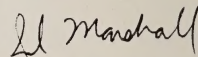
The major television networks use satellites for everything from satellite news gathering and back-haul of programming from remote site to studio, to distribution of their programming feeds to local broadcast stations. Communications via satellite have given the networks the ability to better serve the needs of their affiliates.

The satellite broadcasting industry is quickly coalescing. Satellite broadcast information being accessed through local television rebroadcast, through public and private cable systems and directly through private earth stations. **Via Satellite** is designed to keep the satellite professional informed and up-to-date on the business issues of the industry.

There is competition in this magazine marketplace, with new publications coming out constantly. So **Via Satellite** can't be merely good, it will have to be better, striving to be the best. We have to meet your, the reader's information needs. To do this we need your feedback. Let us know what you like and don't like about the magazine. Tell us what stories were worthwhile reading and which ones weren't. With this feedback we can tailor the magazine to best serve you, the reader.

We at **Via Satellite** thank-you for your support and we look forward to serving your information needs through the years to come.

Sincerely,



Irl Marshall
Publisher

SOUTH STAR. SOUTH FLORIDA'S TELEPORT



South Star Communications Administrative and Operations Center.

South Star's International Teleport services include:

- ★ Full Domestic Arc uplink/downlink ★ Encryption ★ Full VAX 11/780 Data Base Service ★ Telco Interconnect ★ International Gateway Service
- ★ Communications Consulting ★ Total Teleconferencing Services
- ★ E-Mail/Store and Forward ★ Networking
- ★ Private Microwave Service ★ Ad Hoc Network Consulting

Dedicated 300 Baud "E-MAIL" Line 305/472-8401

Contact: BARRY PASTERNAK - (305) 472-8111 Telex 3728008 South Star Ftl

Member of the ATA.



SOUTH STAR COMMUNICATIONS, INC.

AT NOVA UNIVERSITY • 3303 College Ave. • Davie, Florida 33314
(minutes from Miami or Ft. Lauderdale International Airports)

Index of Advertisers

American Uplinks	-21
ABCI	-11
Brightstar	-34
Comtech Antenna	-36
Comsat General	-5
Guycom	-35
MSI	-33
Phillips Publishing	-2
PTC	-13
Rainbow Network Communications	-24
Satellite Relay	-25
Sat Expo	-29
September Moon Productions	-8
South Star Communications	-6
Steve Tolin Enterprises	-18
Via Satellite	-26
W.B. Walton Enterprises	-3

Leasat 3 Operational

LOS ANGELES—Hughes Communications delivered for service the Leasat 3 satellite to the U.S. Navy late last year, culminating what the company's president Steven D. Dorfman termed "the most extraordinary salvage operation in space history." The final step in this historic eight-month space saga was completed when Hughes engineers presented the Navy with the results of extensive tests verifying the health of Leasat 3's communications payload.

"The successful salvage and delivery of Leasat 3 is a triumph of technology, hard work and cooperation," said Dorfman. "It culminates eight months of remarkable efforts by Hughes and NASA scientists and engineers who devised procedures and equipment to 'hot wire' the satellite in space."

The salvage for the satellite had particular significance to the underwriting community. Under the terms of a unique revenue-sharing agreement previously arrived at, payments

to the insurance underwriters from Hughes will begin in the near future. A significant amount of the \$85 million insurance loss will be repaid to the underwriters for the lifetime of the satellite.

Leasat 3 failed to turn on after a successful deployment from the space shuttle Discovery in April of 1985. Subsequent attempts at trouble-shooting also failed. Then after reconstructing hardware for the satellite, NASA astronauts rendezvoused with Leasat in August of 1985 and successfully attached special hardware that enabled the satellite to be turned on and controlled from the ground. Hughes Communications fired the satellite's motor late in October and spent the following month doing extensive testing to verify the health of its communications payload.

Leasat 3 is part of a planned worldwide communications network of four satellites and associated ground stations to be used by the armed forces for electronic mail and other services.

Council will explore current developments and technological breakthroughs at its eight annual conference, Jan. 12-15. PTC '86, titled "Evolution of the Digital Pacific," will focus on technological advances and consequent human resource needs in the telecommunications field. Close to 600 people from 30 nations are expected to attend. International telecommunications experts Richard Butler, Brian Pemberton and Toru Uehara will be among the speakers at the conference.

Butler, secretary-general of the ITU, will speak on "Managing Human Resources Today and Tomorrow." Pemberton, COO of Cable & Wireless, PLC, will talk about "Pacific Facilities Developments." Uehara, associate vice president of international affairs of Nippon Telegraph and Telephone will discuss the evolution of domestic telecommunications in Japan.

The PTC conference, which is held every January in Honolulu, provides a permanent forum for the exchange of ideas and information among telecommunications professionals in the Pacific Area.

Innovative News Coverage

MINNEAPOLIS/ST. PAUL—"EN"—Late last year, KSTP-TV's one-hour broadcast of the President's report to Congress on the Geneva Summit sidestepped traditional network coverage and offered viewers both President Reagan's remarks and in-depth local and national coverage produced by the station, utilizing the satellite services of Conus Communications.

KSTP, the Hubbard Broadcasting station in Minneapolis/St. Paul, anchored its coverage in Minnesota. It carried the President's address and reaction from the state's Congressional delegation live from the nation's capital through Conus Washington Direct. Additional commentary and reaction was provided by Minnesota observers and three live remotes with area groups concerned with arms control issues.

"Our alternative was to ground the presentation of the President's brief report to the Congress in something other than the standard network fare," said Scott Goodfellow, KSTP's news director. "We did that by putting a

unique, local focus on the President's messages. That enabled our viewers to evaluate his message directly and through the reaction of Minnesota's Congressional delegation."

In addition to members of the Minnesota Congressional delegation, KSTP's live reaction remotes included post-speech interviews in Minneapolis with Women Against Military Madness; in St. Paul with participants in Ground Zero, a youth-oriented nuclear issues group; and with farmers in Winthrop. Commentary was offered by Harlan Cleveland, dean of the Hubert H. Humphrey Institute of Public Affairs, and John O'Neil, VFW adjutant general.

PTC '86 To Explore Digital Pacific

HONOLULU—Faced with the challenge of bringing the vast expanse of the world closer through communications, the Pacific Telecommunications

Space Society Formed

LONDON—"EN"—A new organization has been formed in Britain to bring together people involved in all aspects of the space industry and satellite communications. Called "The Space Society," it was formally inaugurated at a general meeting of founder members at the Grosvenor Hotel in London. During the past year, a steering group arranged a series of meetings which attracted an initial membership of more than 100 with interests including manufacturing, research, education, telecommunications and the media.

Tony Sumner, Kleinwort Benson, is chairman and Mike Quigley, Inmarsat, is honorary secretary. The Society's future plans include regular meetings addressed by leading experts in the space business.

Further information on The Space Society can be obtained from Peter Marshall, general manager, Visnews Ltd., Cumberland Ave., London NW10 7EH, England.

CALENDAR

JANUARY

- 9-12: Winter Consumer Electronics Show, Convention Center, Las Vegas, NV. CES Group/Electronic Industries Association. 202-457-8700.
- 13-14: Satellite Communications Seminar, Halloran House Hotel, New York, NY. Frost and Sullivan. 212-233-1080.
- 12-15: PTC '86, Hawaiian Regent Hotel, Waikiki, Honolulu, Hawaii. PTC '86, Pacific Telecommunications Council, 1110 University Ave., Ste. 308, Honolulu, HI 96826. 808-941-3789.
- 15-17: International Business in Space, JW Marriott Hotel, Washington, DC. The Center for Space Policy, Inc., 02140, 617-576-2828.
- 17-22: NATPE (National Association of TV Program Executives), Louisiana Convention Center, New Orleans, LA. 212-757-7232.
- 27-28: Satellite Technology for the Non-Technical Manager, Hilton/Walt Disney World Village, Orlando, FL. Phillips Publishing, Inc., 301-340-2100.

FEBRUARY

- 19-21: Space/STTI Satellite Trade Show, Las Vegas Convention Center, MGM Grand Las Vegas NV. STTI, 702-367-1474 or 800-654-9276.

- 24-25: Satellite Technology for the Non-Technical Manager, La Jolla Marriott Hotel, San Diego, CA. Phillips Publishing, Inc.,

MARCH

- 4-6: Eurocast 86, World Trade and Convention Center, Basel, Switzerland. Contact: 01-861-4877.
- 15-17: National Cable Television Association Show, Dallas Convention Center, Dallas, TX. NCTA, 202-775-3629.

APRIL

- 3-4: First Annual Satellite News Executive Conference, Marriott Crystal Gateway Hotel, Washington, DC. Phillips Publishing, Inc., 301-340-2100.
- 13-16: National Association of Broadcasters Convention, Dallas Convention Center, 202-429-5350.
- 27-30: Houston Space and Telecomm Trade Symposium, Houston, TX. Jeff Roberts, 713-777-0266.

EXPERTS.

**20 Years
of
Telecommunications Expertise**


- **Needs Analysis**
- **Network Planning**
- **Event Management**
- **Content Development**
- **Program Production**
- **Telecast Direction**

• **single source
telecommunication
specialist/consultants**

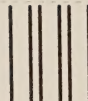
**Southfield, Michigan
(313) 540-4144**

U.S. Department of Transportation

Ad Council



**DRINKING & DRIVING
CAN KILL A FRIENDSHIP.**



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

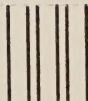
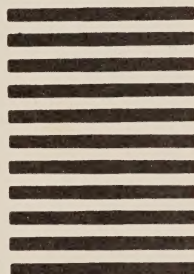
BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 1001 ENGLEWOOD, CO

Postage will be paid by addressee

Via Satellite Magazine
P.O. Box 2220
Englewood, CO

80150



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

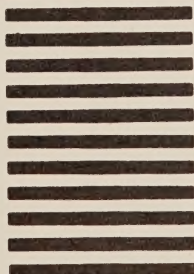
BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 1001 ENGLEWOOD, CO

Postage will be paid by addressee

Via Satellite Magazine
P.O. Box 2220
Englewood, CO

80150



FREE SUBSCRIPTION TO VIA SATELLITE MAGAZINE!

For a limited time only, you can receive three FREE issues of VIA SATELLITE MAGAZINE or one full year (12 issues) for the low price of only \$19.95.

VIA SATELLITE is the ONLY trade journal dedicated exclusively to the satellite broadcasting industry. The programming marketplace is solidifying quickly around the use of satellite communications to deliver products to local television stations, cable television systems and directly to homes.

You, the executive, need to keep up with the fast pace of this nascent industry, to keep on top of the market to make the right business decisions.

VIA SATELLITE is your one-stop source of an in-depth look at industry news and for analysis of what it means to you. Once you've read it, you won't want to miss a single issue of VIA SATELLITE.

To subscribe, complete, sign and return the form, along with your check, made payable to: VIA SATELLITE.

Yes, I would like to receive Via Satellite magazine. Please fill in card completely and sign.

- ☐ 3 issues FREE (Charter Subscription Offer) ☐ 1 year (12 issues) \$19.95 ☐ 2 years (24 issues) \$34.95
☐ Check Enclosed (Payable to Via Satellite magazine) ☐ Bill Me

Industry Qualification (Check one only)	04 <input type="checkbox"/> Private Cable	09 <input type="checkbox"/> Satellite Equipment	15 <input type="checkbox"/> Legal/Finance/Insurance
01 <input type="checkbox"/> TV and Radio Broadcasting-	05 <input type="checkbox"/> MMDS or STV	Distributor/Dealer	16 <input type="checkbox"/> NASA/NASDA/ESA or other government agency
Network Operations	06 <input type="checkbox"/> Satellite Networks and	10 <input type="checkbox"/> Satellite Carrier	17 <input type="checkbox"/> School/Library/Student
02 <input type="checkbox"/> TV and Radio Broadcasting-	Facilities Providers	11 <input type="checkbox"/> Programming Producer	18 <input type="checkbox"/> Press
Local Station	07 <input type="checkbox"/> Teleport Operator	12 <input type="checkbox"/> Programming Syndicator	19 <input type="checkbox"/> Advertising Agency
03 <input type="checkbox"/> Cable Television	08 <input type="checkbox"/> Satellite Equipment	13 <input type="checkbox"/> Pay-TV Network	20 <input type="checkbox"/> Other
	Manufacturer	14 <input type="checkbox"/> Engineering/Consulting	

Name _____

Title _____

Company _____

Address _____

City, State, Zip _____

Phone _____

Signature _____

Yes, I would like to receive Via Satellite magazine. Please fill in card completely and sign.

- ☐ 3 issues FREE (Charter Subscription Offer) ☐ 1 year (12 issues) \$19.95 ☐ 2 years (24 issues) \$34.95
☐ Check Enclosed (Payable to Via Satellite magazine) ☐ Bill Me

Industry Qualification (Check one only)	04 <input type="checkbox"/> Private Cable	09 <input type="checkbox"/> Satellite Equipment	15 <input type="checkbox"/> Legal/Finance/Insurance
01 <input type="checkbox"/> TV and Radio Broadcasting-	05 <input type="checkbox"/> MMDS or STV	Distributor/Dealer	16 <input type="checkbox"/> NASA/NASDA/ESA or other government agency
Network Operations	06 <input type="checkbox"/> Satellite Networks and	10 <input type="checkbox"/> Satellite Carrier	17 <input type="checkbox"/> School/Library/Student
02 <input type="checkbox"/> TV and Radio Broadcasting-	Facilities Providers	11 <input type="checkbox"/> Programming Producer	18 <input type="checkbox"/> Press
Local Station	07 <input type="checkbox"/> Teleport Operator	12 <input type="checkbox"/> Programming Syndicator	19 <input type="checkbox"/> Advertising Agency
03 <input type="checkbox"/> Cable Television	08 <input type="checkbox"/> Satellite Equipment	13 <input type="checkbox"/> Pay-TV Network	20 <input type="checkbox"/> Other
	Manufacturer	14 <input type="checkbox"/> Engineering/Consulting	

Name _____

Title _____

Company _____

Address _____

City, State, Zip _____

Phone _____

Signature _____

TeleCon VI

The Sixth Annual Teleconferencing Users Conference

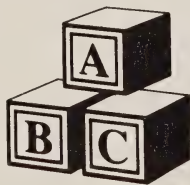
October 27, 28 & 29, 1986
Anaheim Marriott Hotel • Anaheim, California

The Largest Conference & Trade Show on Teleconferencing

- 1300 Attendees in 1985
- Now combined with Visual Communications Congress Conference of Los Angeles
- More than 120 Exhibit Booths on all Forms of Teleconferencing Products and Services

***We welcome "Via Satellite" and
support the annual Sat Expo. Our best
to Irl Marshall and his staff –***

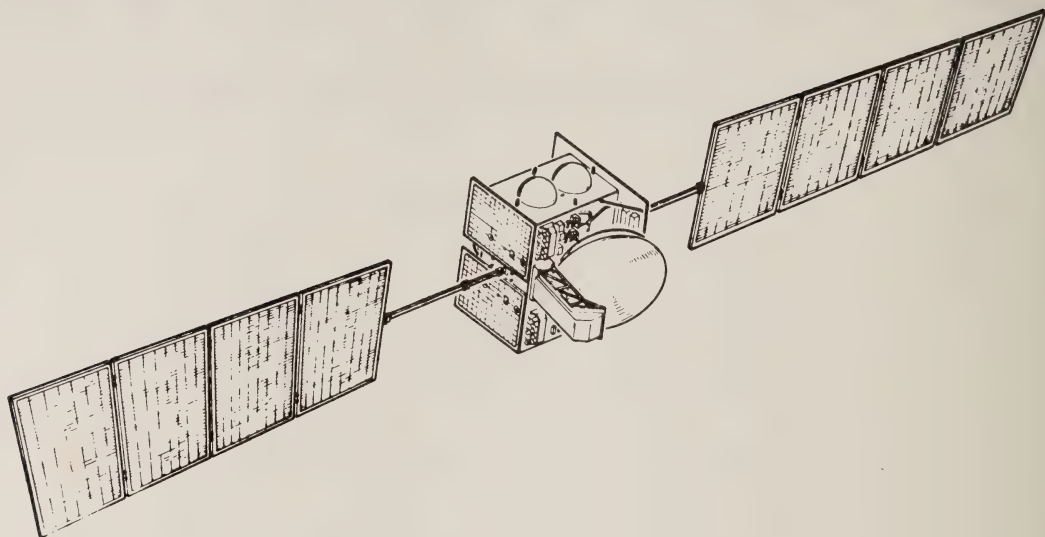
Good Luck!



APPLIED BUSINESS teleCOMMUNICATIONS

BOX 5106, SAN RAMON, CA 94583 (415) 820-5563

RCA'S KU-BAND GAMBLE PAYS OFF



by Irl Marshall
Editor/Publisher
Via Satellite Magazine

On December 6, 1985 at 5 a.m. EST RCA's K-2 satellite reached its orbital position of 81° W longitude, thus opening the era of Ku-band satellite broadcasting (See Fig. 1). Previous Ku-band satellites have had amplifiers of approximately 20 watts, whereas K-2's transponders are powered by 45 watt TWT amplifiers. K-2's signals will be receivable by earth stations with antennas of one meter in diameter and less (See Fig. 2).

The launch however was not without its worries. Due to the high number of recent launch failures and attendant insurance claims, there was very little insurance available and that at very high rates. Faced with the inability to procure adequate insurance at reasonable rates, RCA made the decision to "self-insure" the satellite.

At risk were the approximately \$100 million that RCA had invested in the hardware and its launch and revenues from transponder leases that could total over half a billion dollars. With the decision to self-insure, RCA saved an estimated \$30 million that would have been paid in insurance premiums.

The decision to self insure was almost unavoidable. Only partial coverage was available and the estimated rate of 30% meant that only 2 successes out of the three Ku-band satellites were necessary to break even. As one insurance industry analyst put it "I'm glad that RCA chose to self-insure. If they had paid those inflated ratio, the rates would have been legitimized. The underwriters have priced themselves out of the market."

RCA Americom's customers include NBC, Hubbard Broadcasting and AT&T. They will also use K-2 for their own syndicated programming distribution offering (See Fig. 3).

The launch of K-2 was to be quickly followed by the launch of K-1 from the space shuttle Columbia on Dec. 18th. But due to valve problems on Columbia, the launch of K-1 has been delayed until January 4, 1986. K-1 also offers service of 16 Ku-band transponders of 54 MHz bandwidth. This satellite will be used for distribution of SMATV and direct-to-home services as well as private network voice, video and data services. The third satellite in RCA Americom's Ku-band system, K-3, is not scheduled for launch until 1988.

**Fig. 1: K-2 Launch Timetable
(all times EST)**

Shuttle Launch — Atlantis	7:29 p.m. — Nov. 26th
Deployment	4:57 p.m. — Nov. 28th
PAM D-2 Firing	5:42 p.m. — Nov. 28th
AKM Firing	1:53 p.m. — Dec. 1st
Array Deployment	6:00 a.m. — Dec. 3rd
Earth Lock	7:00 a.m. — Dec. 3rd
On Station	5:00 a.m. — Dec. 6th
Operational	end of December 1985

Fig. 2: K-2 Technical Parameters

Downlink Frequency	11.7-12.2 GHz
Number of Transponders	16
Power	45 Watt TWT Amplifiers
Bandwidth/Transponder	54 MHz
Weight: Launch	4,245 lbs.
On-Orbit	2,255 lbs.
Orbit Location	81° West Longitude
LIFE	10 Years
Stabilization	3-axis

Fig. 3: RCA's K-band Satellites

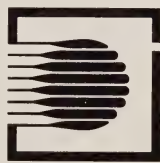
	K-2				K-1
Customers	Hubbard Broad. CONUS USSB	NBC	RCA Americom	AT&T	At press time the exact transponder line-up for K-1 was unannounced. 4 transponders leased for encrypted HBO/Cinemax feeds. 1 transponder to RCA Service Corp. (lodging PPV feed).
# of transponders	4	8	2	2	16
Uses	SNG	Network distribution and backhaul	Syndicated programming	Corporate data broadcasting	SMATV and direct-to-home type of services as well as private network voice, video and data services.

GENERAL ELECTRIC TO PURCHASE RCA CORP.

At presstime it was learned that General Electric has proposed a \$6.28 billion purchase of RCA Corp., owner of the National Broadcasting Company, RCA Americom Communications and many other communications interests. The merger, subject to stockholder and regulatory approval, is scheduled to be completed late this year and calls for General Electric to pay \$66.50 for each of RCA's 94.4 million outstanding shares. RCA's stock has sold for as low as 34% and as high as 63½ in the last twelve months.

According to John F. Welch GE's chairman, the merger will be financed with four to five billion dollars in bank debt, giving the combined company a debt to capitalization ratio of not more than 30%. The merger was hailed by both companies as good news.

January 12-15, 1986
Honolulu, Hawaii



PTC '86

Evolution of the Digital Pacific

- ☐ Leaders in industry, government & academia
- ☐ Users ☐ Suppliers ☐ Carriers ☐ Regulators
- ☐ Policy ☐ Technology ☐ Needs ☐ Training
- ☐ Asia ☐ Pacific ☐ Latin America
- ☐ North America

Sponsored by the
Pacific Telecommunications Council
an international, non-profit, membership organization providing a continuing forum for the Pacific through annual conferences, mid-year seminars, workshops & publications.

Further information:
PTC / 1110 University Avenue, Suite 308
Honolulu, Hawaii 96826 USA



TCI UNVEILS PLAN TO MARKET PROGRAMMING TO TVRO CONSUMERS

by Lloyd Covens
Executive Editor

For five years, the C-band receiving earth station business grew quietly from 25 private terminals in 1979 to over 1.5 million by the close of 1985. When the FCC deregulated the licensing of satellite earth stations on October 18, 1979, the proliferation of private terminals was underway. At first the systems sold for a hefty \$35,000-plus, but now with electronics and antennas in mass-production, single-satellite, fixed systems are selling for under \$1,000.

With passage of the 1984 Cable Communications Policy Act, the private use of satellite systems for receiving unscrambled cable and satellite video services was forever legitimized. Among the provisions in the bill was the option for programmers to scramble and sell satellite programming to home terminal owners. In the year that has passed, the satellite earth station business through its trade group SPACE, and the cable industry through the NCTA (National Cable TV Association) and CATA (Community Antenna Television Association) have been at war over the issue of access to scrambled programming at fair and competitive rates.

While two bills are pending in the House, and one companion bill introduced in the Senate, hearings on the entire issue of sales of scrambled programming before the House Telecommunications subcommittee are set for early 1986. Further, the Department of Justice is investigating possible anti-trust activities within the cable industry.

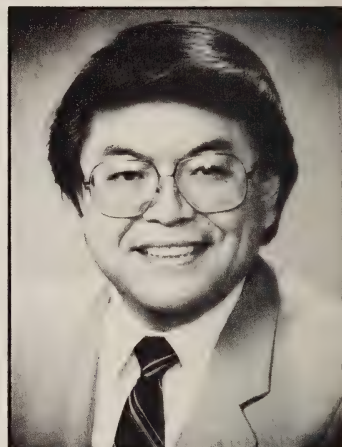
But despite the public clamor, quietly, behind-the-scenes representa-

tives of both the home satellite industry and the cable industry have held informal discussions on arriving at an equitable and fair marketing plan. At issue is what programmers will charge, and who will distribute those signals.

The December Western Cable Show brought an announcement from the nation's largest multiple-system-operator, Telecommunications, Inc.(TCI) on how they plan to sell services to backyard dish owners. While not yet formalized, the structure for TCI's plan is likely to become the model other cable operators follow as they seek to gain a portion of the booming home satellite business.

With some 12 basic satellite services, and some six premium channel services announcing their intention to scramble this year, the common thread is the selection of decoder: M/A-COM's Videocipher 2 at a suggested retail rate of \$395. Although other companies, such as Scientific Atlanta and Oak Industries had proposed comparable decoders, M/A-COM's early selection by HBO seemed to have tilted other programmers toward the Videocipher technology.

Moving from a position of antagonism, toward accommodation, and soon, possible resolution, the proponents of a 'fair' compromise seem to be moving toward a common ground. Satellite dish owners should pay for programming "at or below" those rates paid by cable subscribers. While both the NCTA and a group of programmers headed by Viacom's Showtime have now shelved their plans, it is an open question how—and if—other third party packagers can



John Sie

bring pricing any lower.

The TCI plan to serve the backyard market has been dubbed "Satpak," and comes in response to weeks of planning by TCI's senior vice-president John Sie. With the announcement of the plan, which applies to areas "in or near" existing TCI franchises, the issue of decoder costs may be handled through the company's offer to make decoders available for rent for \$6 to \$8 per month. The plan also would pay "qualified" satellite dealers to act as "commissioned sales agents" for TCI's package of program services. (SEE BOX FOR DETAILS).

In bundled fashion, the initial ten basic services offered in the TCI Satpak would sell for \$6. For premium channels, the first pay service purchase will sell for \$10, and \$6.50 for all subsequent premium channels purchased. The dish owners will be asked to pay

a monthly access charge of \$6 for establishing and maintaining the customers unique "address" and account at the M/A-COM DBS Control Center in San Diego. This access charge allows the user to select one or more combinations of basic and premium service.

For a dish owners wishing to subscribe only to scrambled basic channels, the monthly charge would come out to around \$18 to \$20 per month, comparable to cable rates. For premium only service(ie., only subscribing to Showtime, and no scrambled basics), the home TVRO customer would pay \$16, with an additional charge for the decoder. This rate is still much

higher than the average national retail charge of \$9.50 for HBO. But if the buyer selects a second premium channel, the net charges(around \$22) get closer to national average rates.

The TCI plan will no doubt be debated heavily by home satellite interests, however it represents a significant step in the right direction. At issue will be potential future increases in these rates. Also at issue will be possible compensation to services which have no plans to scramble(ie., C-Span) which currently charge cable operators for carriage.

While a formal resolution of all issues is not complete, these and other

events in Washington² seem sure to settle out most concerns by late Spring, 1986. A far cry from just two years ago, when the official plans of HBO were to scramble their signals and not serve the backyard market at all. But also present is the reality of basic, advertiser-supported signals also joining the move to scrambling.

And of course, while the C-band packaging debate continues, most of the distribution channels and comparative package prices will have a major impact on the development of Ku-band service in bringing video entertainment and information to the nation.

The TCI "SATPAK" Plan

Category	Charge	Services
ACCESS CHARGE Paid to give TVRO owner a unique "address" and account at the M/A-COM DBS Control Center in San Diego	\$6⁰⁰/month	Enables earth station owner to purchase any one or more program service "a la carte" or on a standalone basis.
Basic Program Fee Programmers listed are 'bundled' or 'packaged.'	\$6⁰⁰/month Individual prices likely to be .50 to \$2.00 per month Individually	CNN/Headline News (\$25/yr. direct) MTV; VH-I; Nickelodeon; CBN; Nashville Net; BET; Arts & Entertainment; Lifetime Other Channels Likely to be Included: * ESPN; USA Network; Weather Channel
Premium Program Fee	\$10⁰⁰/month for 1st service \$6⁵⁰/mo. For each additional premium service	HBO (offered direct at \$12.95/mo.) Cinemax; Showtime; Movie Channel; Disney

*The status of selling or scrambling superstations (**WTBS, WGN, WOR, WPIX, etc.**) is unclear at this time due to copyright and common carrier regulations.

DECODERS:

MA-COM's Videocipher 2 will sell at \$395 from established satellite dealers or cable operators who participate. For areas "in or near" TCI Franchises, an option to rent the decoder for **\$6 to \$8** per month will be offered.

THE SATELLITE NEWS GATHERING ARENA

By Cheryl R. Carpinello,
Associate Editor

Satellite news gathering (SNG) is the instant exchange of news stories between broadcasting stations across the country via satellite. This is accomplished by use of permanent up/downlinks and transportable uplinks that are supported by a communications command center.

The groundwork for SNG was laid by several pioneering companies. Companies like Compact Video Satellite Services Division, Bell & Howell Satellite Network, PSSC Transportable Earth Station (TES) Division, Netcom/TES, Robert Wold Company and Satellite Syndicated Systems.

These companies and others, some of which are no longer active in the satellite communications field, experimented with and perfected the techniques involved in one-way video and voice and two-way interactive video and voice. Countless numbers of teleconferences, sports and concert presentations and newscasts performed by pioneering companies all helped pave the way for the service offerings now available via satellite. Satellite news gathering is one of these.

Full service News Networks

Two companies offer full news gathering services to broadcasting stations across the U.S.: CONUS and

Group W. CONUS was the first Ku-band service and Group W's Newsfeed Network was the first C-band service.

CONUS

CONUS (CONTinental US), a division of Hubbard Broadcasting, first introduced its Ku-band service at the 1984 NAB in Las Vegas. Since then, 31 stations have joined the CONUS group and 27 of these stations have SNG trucks.

Charles Dutcher, vice president, describes CONUS as one-stop shopping for SNG seekers. It provides subscribers with local news via SNG trucks and regional and national news via satellite feeds.

All stations share in the services provided by the master control center in St. Paul, Minnesota. These services include a monitoring of truck transmitter power-up, coordination of shared news stories between stations and two-way communications between local TV stations and associated mobile uplinks. SNG trucks are often shared between several stations permitting stations to send only a reporter to a news scene outside the broadcasting area.

CONUS operates on exclusive contracts in a market area, Dutcher stated, permitting only one station in the area to join the network. Long range plans

call for CONUS subscribers and SNG trucks to be present in the top 50 markets.

Early next year, the CONUS system will switch to RCA's K2 satellite which was launched late in November. CONUS has seven transponders reserved on K2 for system expansion.

Group W Newsfeed Network

Newsfeed Network was started in January 1981 as an experimental C-band information exchange service among five Group W-owned stations. The reasoning behind Newsfeed Network was to determine if broadcasting stations had sufficient interest in sharing news material to warrant a full-fledged news gathering system. Group W discovered that stations across the nation were very interested in happenings that the stations did not have access to normally.

The service started out with the exchange of sports highlights and local political happenings that occurred outside of a stations' normal broadcast range. Newsfeed Network expanded rapidly in the following years and now includes subscriber stations in the top 10 markets and is viewed by 73 percent of all TV households, stated Richard Sabreen, vice president. In addition, Group W has added DC Live! to its network giving stations live



news shots from the White House.

Newsfeed Network broadcasts a minimum of 11 hours per week, not including special news flashes. The daily news exchange begins in the Philadelphia operations centers with a conference call between subscribers, news directors for Newsfeed and the Washington Bureau. Stations let the Newsfeed directors know what stories they are interested in covering and together they decide what goes on the network. Special requests for stories are also taken and broadcast coverage is arranged. Because the network is not using portable trucks at this time, the closest uplink to a story is used for transmission. Stories are sent packaged and unpackaged (with natural sound video and supported scripted material).

Although seen as a C-band service, Sabreen stresses that Newsfeed Network will use whatever means enables the network to deliver a clear picture quickly. Stories are also sent via Ku-band satellites and AT&T land lines. "We are in the content business, not the satellite business," added Sabreen.

Newsfeed Network is offered as an exclusive market service. Connection to the network is immediate and stations can also access the network with computers.

Benefits of the Newsfeed Network, according to Sabreen, are custom coverage, locally-oriented broadcasts, the single greatest selection of sports highlights available and the Washington Bureau, DC Live! Without revealing the cost to subscribing stations, Sabreen said that the service is economical and costs less than sending a news crew to cover a story.

Network News Services

Much has been said about the Networks' late entrance into the satellite news gathering race. It has been called a last ditch effort and an attempt to move in on the profits that other SNG companies have found lucrative. But while stating that competition for SNG subscribers has played a part in the startup of network SNG services, this is not the networks' main reason for providing these services.

Both NBC and CBS have just recently finished converting their affiliates to satellite distribution. With their respective satellite systems now in place, the networks have begun to use the myriad of services that satellite communications provides them with.

So why have they turned to SNG services first when other companies are offering these services and have been for some time? The answer is a resounding one: It is the networks job and commitment to the affiliates to see that the affiliates' needs are provided for by the networks. Satellite news gathering is one such need demanded by the affiliate stations.

ABC declined to comment on its SNG plans although a spokesperson stated that ABC's plans would be unveiled in the near future. The spokesperson also added that ABC was looking to supplement its microwave system with satellite services.

CBS Regional News Service

CBS launched its Regional News Service in May 1984 in the Southwest (New Mexico, Texas and Louisiana).

The next region added was the Southeast (New Orleans, Mississippi, Alabama, Georgia, Florida, Virginia, North and South Carolina, Tennessee and Kentucky). The main hubs in the southeast are Charlotte, NC and Tallahassee, FL. In October of 1985, the Western region was added as one large cooperative that is fed by satellite according to segments. These segments are California/Nevada, the Rocky Mountain area and the Northwest. The main hub for the region is Salt Lake City with subhubs in Sacramento (CA/NV) and Portland (NW).

Early 1986 will see the addition of the Plains or Central region with hubs in Minneapolis and Kansas City. By March of 1986, CBS will add the final two regions to its service, the Eastern or industrial region and the Northeast.

According to Bob Horner, vice president of the news services for CBS News, the concept for the regional service came about because of the "black hole" affiliates noticed in their news service offerings. This "black hole" consisted of little or no information coming from nearby states that viewers would be interested in or that could have an economical or political effect on viewers in surrounding areas.

In addition, the Regional News Service also upgrades those affiliates that are national in scope with additional national news feeds and more lead time on late feeds. Starting last month, CBS News planned to deliver national feeds at 11 am and 10:30 pm (eastern) instead of the single nightly feed previously offered.

Cost of the Regional News Service is being shared by local affiliates and CBS. According to Horner, the service is a break-even venture. Market size of the affiliate is the determining factor in the cost of the system. Stations in the top 10-20 market will be looking at a cost of approximately \$40,000, while those in the 180-200 market will have a cost of around \$5,000.

Horner predicts that by the first of the year, 100 of CBS' 200 affiliates will be signed up for the service in the three regions now up and running. CBS' Regional News Service will be offered strictly to CBS affiliates. Independents will be offered membership only if the CBS affiliate in that market area declines the service.

CBS currently delivers its C-band
(continued on page 32)

1986 OFFICIAL

SATELLITE DIRECTORY AND BUYER'S GUIDE

BIGGER & BETTER THAN EVER!

The official source book of products and services for the satellite industry. The new 1986 OFFICIAL SATELLITE DIRECTORY & BUYER'S GUIDE will be off the press in May 1986.

In 1985 we published the most comprehensive satellite directory and buyer's guide. Hailed by most everyone as the best directory and buyer's guide ever published by the industry.

We are now accepting advance reservations for the all new 1986 edition.

The 1986 OFFICIAL SATELLITE DIRECTORY & BUYER'S GUIDE will be even **BIGGER & BETTER THAN EVER!**

Thousands of new listings are being gathered and assembled to assure that next year's book is completely up to date. The 1986 edition will have 3 NEW tabs that will make this year's directory more outstanding than ever. They are:

1. **MASTER INDEX** — Alphabetical section of all names in the directory
2. **YELLOW PAGES** — Associations, publications, consultants, etc.
3. **CANADA** — Listing of all manufacturers, distributors and associations throughout Canada.

As in the past the 1986 OFFICIAL SATELLITE DIRECTORY & BUYER'S GUIDE will also include these important features:

1. **PRODUCT DIRECTORY:** A-Z coverage of virtually all the products available for the satellite industry.
2. **MANUFACTURER DIRECTORY:** Hundreds of specific manufacturers of satellite products, fully identified with addresses and phone numbers.
3. **DISTRIBUTORS:** A state-by-state breakdown of all satellite distributors with addresses and phone numbers.
4. **ASSOCIATIONS:** All the satellite trade associations.
5. **PUBLICATIONS:** All the satellite industry trade publications are listed so that you can contact them for more information.
6. **SATELLITE COMPANY PROFILES:** Expanded listings for many key manufacturers and distributors with extensive product descriptions and key individuals to contact.
7. **INDUSTRY MEMBER CROSS REFERENCE:** Know someone's name but can't remember which company he works for? This section will find him or her for you.
8. **PROGRAMMING SERVICES:** A special section detailing what satellite programming is available and where to obtain it.
9. **TOLL FREE PHONE NUMBERS:** A useful money saver that lists all 800 WATS lines for many satellite manufacturers.

The 1986 OFFICIAL SATELLITE DIRECTORY & BUYER'S GUIDE will include every source you'd ever want to know about. All this for just \$50.00 BUT ACT NOW and we will give you a full 20% off cover price. For just \$40.00, you can have this 1986 directory if you order before February 28, 1986. Use the coupon below to reserve your copy.

Please send me _____ copies of the **1986 Official Satellite Directory & Buyers Guide** at \$40.00 per copy \$ _____

Sales Tax (Calif. residents add \$2.40 per book) \$ _____

Postage and Handling add \$3.00 per book \$ _____

Enclosed is my check in the amount of ... TOTAL \$ _____

I understand that if I'm not fully satisfied with the Directory I can return it within 30 days for a full refund

Other Ways to Order
(Check the one you prefer)

☐ Bill Me

☐ Charge my ☐ Visa

☐ Master Card

☐ American Express

Account Number _____

Expires _____

Pre-publication offer expires February 28, 1986

TO ORDER YOUR COPY BY PHONE, CALL TOLL FREE (800) 523-5533 or (619) 323-2000

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE { _____ }

Signature _____

MAIL TO: 1986 Official Satellite Directory & Buyers Guide - P.O. Box 2772 - Palm Springs, CA 92263

KPLR MOVES FULL FORCE INTO SATELLITE BROADCASTING

by Randy Palubiak
Koplar Communications



Thru the mid-seventies, independent television stations in the U.S. did not have access to national and international news as did the network affiliates. Satellite distribution of live coverage and/or even taped stories was in its early stages and the cost of feeding the stories via landline, especially to many different locations, was simply too expensive.

ITNA

In an effort to overcome this disadvantage, and to be able to provide viewers with more than local news, a number of aggressive independent television stations in the country banded together to form the Independent Television News Association (ITNA), which came on line in 1976. Included as one of the nine charter members was KPLR-TV in St. Louis.

The association functioned as its own news network, with the stations providing their respective local and regional news coverage for the other affiliates. Taped stories were sent to New York where they were uplinked for distribution along with news stories from VisNews out of London.

KPLR-TV was the first broadcast facility to be licensed to install a satellite receiving station. Months later, the

station provided the first feed for the ITNA: a live report from the floor of the 1976 Democratic Convention in New York.

KPLR's downlink was an 11-meter dish, designed by Rohr Industries, Inc. It was a motorized, redundant system with antenna feed horn de-icing, all remote controlled from KPLR's technical (equipment) facility. The dish itself, was mounted atop the parking garage of the Chase Park Plaza Hotel immediately behind the control station.

New Business

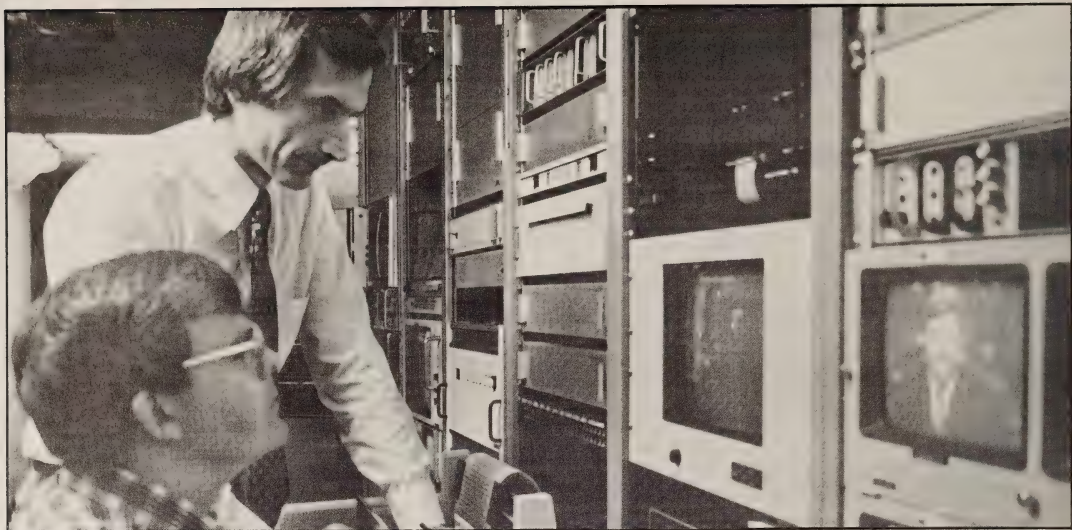
Edward Koplar, president, and Harold Protter, executive vice president and chief operating officer, arranged with Western Union to become the latter's distribution center for the midwest region. Western Union installed an outgoing local loop from KPLR to Telco. This put KPLR in the common carrier business, downlinking news and sporting events and feeding them thru the local loop for distribution via landline to other stations in the midwest. In effect, this established KPLR-TV, for what was to become a popular name in recent months, as the country's first teleport.

By the early 1980s, the number of television stations with downlink dis-

hes increased to the point where satellite distribution of news stories and programming was more cost effective than via landline. In addition to the independent television stations utilizing earth stations for feeds, the networks and respective affiliates have primarily turned to satellite distribution.

Although the need to provide service for Western Union was on the decline, KPLR's reliance on feeds via satellite was on the increase. Therefore, in 1982, KPLR installed its second receive-only dish on its roof. It was a Simulcast-5 and offered KPLR the opportunity, along with the 11-meter dish, to satisfy its downlink needs for the present.

Also in 1982, KPLR maintained the outgoing local loop when Western Union opted to discontinue its distribution system, as well as its incoming loop. In addition, KPLR added a third dish: a fully redundant nine-meter Harris system with a high speed motor package, computerized facilities controller, four-port feed horn, de-icer and automatic protection switching system. Microwave systems were installed at the major centers in the St. Louis area for the uplinking of sporting events and at two of the network-affiliated stations located in the down-



Jim Wright, vice president of operations for Koplar Communications Center (standing), looks on as Rod Wisdom programs the uplink dish for a satellite feed.

town area to provide them with incoming feeds.

KCC

When combined with its video production capabilities, KPLR was a viable source in the satellite communications industry. Therefore, the communications division, KPLR Productions, branched off to function as a separate company and changed its name to Koplar Communications Center (KCC).

In less than three months, Koplar transmitted over 200 hours of program material, including the first transborder feeds to a Canadian Anik satellite: a three game series of Toronto Blue Jays/Kansas City Royals baseball games, landlined to Koplar from Kansas City. Koplar was one of the original 13 companies to be licensed by the FCC to do the transborder feeds to Canada.

According to Jim Wright, vice president of operations for Koplar Communications Center, "the first couple months of operation were an educational experience. We had to work the bugs out of the equipment and establish the proper operating procedures." Wright added, "we took a crash introduction on how to promote and sell the service. But even more important, we had to find out who were KCC's potential clients."

In the last two and a half years, Koplar has trafficked over 1,600 differ-

ent feeds for clients other than KPLR-TV, including the Miss Universe Pageant (originating from Kiel Auditorium in St. Louis in 1983) and the Miss Teen USA (landlined from Memphis) for CBS; Major League Baseball playoffs for NBC; the 1985 World Series for ABC and international distribution; and newsfeeds for Australia, Great Britain, Canada and others, and videoconferences for corporations headquartered in the midwest including Ralston Purina, Fisher Controls International, Anheuser-Busch and the Seven-Up Company. Estimates indicate that Koplar has received more than 4,500 feeds for KPLR during the same period, as well as for CNN for its source of national and international news.

Good Location

States Wright, "KCC's location is ideal. We are located in the heart of the city, next to the major intersections, and immediately next door to the Chase Park Plaza Hotel." Wright continues, "everything fell into place when Koplar entered the satellite feed business. The Chase is over thirty stories high, which gives our transmit and receive dishes protection from RF interference and allows line-of-site access to virtually any place in the St. Louis area for single microwave hops, including the Arena, Busch Stadium and Kiel Auditorium."

To the benefit of the networks and already more than 95 different television stations around the country, Koplar has developed St. Louis, and the midwest, into a readily accessible source for news coverage with over 500 feeds to date. Koplar has provided live news feeds from nearly everywhere in St. Louis via its portable microwave systems: the UAW meeting regarding its contract with GMC, the 1984 city and statewide elections, the Chicago Cubs run for the pennant, the NCAA Basketball regional playoffs, inclement weather reports around St. Louis, the 1985 baseball playoffs and World Series and the St. Louis/Dallas Monday Night Football Game.

Studio

Recently, Koplar provided 3/4" editing facilities and uplink service for the Ford Motor Company and three of the Australian networks covering a news event at the McDonnell-Douglas Corporation in St. Louis. Koplar's studio features KPLR-TV's news set and hard cyc areas that make it attractive for originating live news feeds. ABC's Nightline and Good Morning America, the Cable News Network and PBS's MacNeil/Lehrer Report are among the users of this service.

Jim Winkle, production manager for Koplar, believes KCC is one of the better equipped transmission facilities for live or taped feeds. According to



KPLR technicians operate the board at their St. Louis production facility.

Winkle, "everyone on our production and engineering staffs have strong news and broadcast backgrounds. They are experienced with live productions."

Koplar's local loop and downlink capabilities generate a substantial amount of turn-a-round business for out-of-town events. KCC has trafficked major boxing events (usually out of Las Vegas), baseball games and other sporting events out of Kansas City, Chicago, Milwaukee, etc.

Videoconferencing

Although sporting events and news stories are the bulk of its satellite business, Koplar is interested in the development of videoconference business for its commercial and corporate clients. Despite the fact that videoconferencing appears to be waning overall, KCC continues to maintain its share of the business. Koplar has recently originated a number of videoconferences for corporate giants headquartered in St. Louis, including Ralston Purina, Anheuser-Busch and Moog Automotive.

The Young Presidents' Organization (YPO), New York, has turned to Koplar on four different occasions to produce and coordinate videoconferences with such notable guests as Vice President Bush from the BizNet Studio in Washington, D.C., Ted Turner from his own studio at WTBS in Atlanta

and T. Boone Pickens from the KPBS studio in San Diego. YPO has already scheduled another videoconference for Koplar to produce in 1986 originating from Mexico City.

One of the more unique applications of videoconferencing produced by KCC was for KPLR-TV's "Night of 11 Stars" client party. The event was held at the Planetarium in Forest Park. Most of the program originated from the Koplar studio and was microwaved directly to the Planetarium. Three in-flight V-star systems projected the program onto the domed ceiling for the enjoyment of more than 300 clients. Performers in the studio included Frank Bonner and Gary Sandy of WKRP in Cincinnati, the Smothers Brothers and wrestler Hulk Hogan. Also, live via satellite from the World studio in Los Angeles were Ed McMahon of Star Search and Ted Knight and other stars of Too Close for Comfort.

The Future

What's the next step for KPLR-TV and Koplar Communications Center? According to Wright, "we now have a solid base in the C-band satellite business for both sports and news feeds. The next logical move is to address the Ku-band capabilities." Wright adds, "we are looking into the feasibility of a Ku-band TVRO in the immediate future and the possibility of a Ku-band transportable uplink in the long run."



STAFF

Irl Marshall — Editor Publisher
Lloyd Covens — Executive Editor
Cheryl Carpinello — Associate Editor
Dr. Robert Filep — Consulting Editor

Brian Tellinghuisen — Account Executive
Robin McClean Starr — Account Executive
Helen Mulvihill — Advertising Coordinator

Kas Fischer — Art Director
Karyn Roth — Composition

Linda Lange — Business Manager
Scott Spicher — Circulation Manager
Dena Newberg — Accounting
Nancy Hardy — Administrative Aide
Don Dimasi — System Operator
Maureen Minnier — Data Input

American Uplinks, Inc.

Transmit Your TV Programming Live Via Satellite!

The number one mobile satellite earth station company in the U.S. Quality advanced electronics, two degree approved, standby power, one low price. NOW IN HAWAII!!

1-800-525-9999
(303) 674-8657

P.O. Box 699
 Idaho Springs, CO 80452

A Division of American Communications and Television Inc.

VIDEO VIA SATELLITE-THE MARKET TAKES OFF

by Arthur Hill
Comsat General

Not too many years ago, a well-known satellite communications publication dispatched a crew of reporters to New York City to interview representatives of the major broadcast networks. The question these reporters wanted answered was: When are broadcasters going to utilize satellites more frequently to distribute programming to their affiliates?

The answer was elusive at best. Some network feeds were distributed to affiliates via satellite, and some programming was backhauled from the West Coast to New York. But the distribution of choice among network operations and engineering chiefs remained the complicated and expensive terrestrial system pieced together over the years by AT&T.

Feeling less than fulfilled, the team returned home to report to its editors that there was little to test the waiting world about the advent of satellite communications in the broadcast marketplace. The story was spiked, due to lack of interest.

To say that the situation has changed in a little over half a decade after the dispirited writers returned home would be a gross understatement. Today, all major networks have installed sophisticated satellite networks. Virtually all broadcasters have a satellite dish on their roofs or in their parking lots. Many have more than one. Not only is network programming distributed by satellite, but most prog-

ramming finds its way to the marketplace via space as well.

And as other articles in this issue of *Via Satellite* detail, broadcasters everywhere are learning about the value of satellite communications in reporting the news, covering sports events and even monitoring the status of their receive stations across town or around the nation.

To be sure, microwave transmissions have not totally disappeared from the face of the earth. In some instances, transmitting signals via satellite to a centered earth station and from these to stations in comparatively isolated markets will continue for some time. But by and large, the broadcast industry has taken a major leap of faith, investing their livelihood and fortunes in a technology which only a few short years ago no responsible broadcast engineer, station manager, or network O&E vice president would have dared consider.

Initially, there were many reasons why the broadcast industry took such a great interest in satellite communications. Flexibility was certainly a key factor. Reliability, was another. And as Ku-band technology emerged, satellite communications became a much easier way to assist broadcasters in meeting their backhaul needs.

Ku-band technology in particular became the litmus test for broadcasters. Chief among their concerns was the reliability of the relatively new

technology, as well as the myths which had developed about the performance characteristics of Ku-band transmissions in poor weather conditions—better known as the "rain fade" problem. Reliability and the vicissitudes of the weather ceased to be major concerns, however, when the NBC satellite distribution system went into operation early in 1985. Designed and built by the Comsat General Corporation, the NBC system has in a relatively short time had a profound impact on the broadcasting industry.

But perhaps the most significant factor in the broadcasting industry's conversion to satellite communications has been the AT&T divestiture. Prior to 1984, the major networks' reliance on AT&T to handle their needs through terrestrial networks was based not only on reliability, but cost. After divestiture, however, the price of terrestrial networking began to increase. No less than two major tariff increases quickly brought the cost of satellite communications within the realm of economic feasibility.

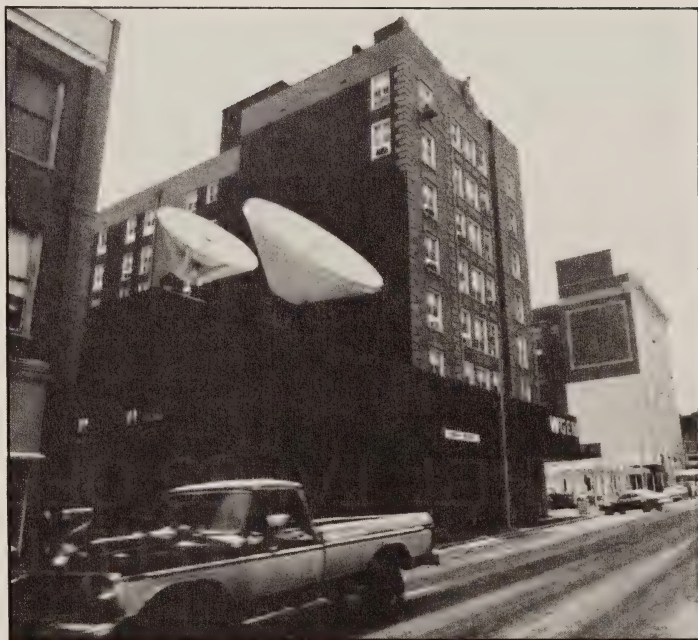
But if cost eventually proved to be the major factor in turning the networks to satellite communications, competition became a major force in individual broadcasters' turn toward the medium. As public affairs programming became a profit center to stations, so too did the need to improve the news by upgrading quality.

Today, news-gathering has become

virtually a 24-hour-per-day operation for broadcasters, with reporters and camera crews constantly on the road in hot pursuit of stories and rating points. As Ted Turner taught the world with CNN, immediacy of news reporting is the characteristic which separates broadcast news from its print counterpart. Whoever gets there first, produces a story and gets it on their air first wins.

For broadcast news executives, the advent of "satellite news gathering," or SNG, has been fortuitous for a number of reasons. For the news director at an individual broadcast station, news via satellite means that for the first time, the station can cover a breaking story which directly affects his viewers from any point throughout the country. For a network news executive, news via satellite means that he can utilize the resources of his affiliates' SNG capabilities, saving time and (even more important) money.

But for the provider of these services, the potential is increased revenues provided through a line of business which 18 months ago did not exist. In addition, companies such as Hubbard's Conus Communications can begin to implement "ad hoc" networks to distribute original news material and—perhaps even more significantly—begin competing with the major networks for sports and entertainment programming through the contributions of member stations.



Two Harris Delta-Gain antennas atop WGEM, NBC's Quincy, Illinois affiliate.



Comsat General's SNG truck.



Rainbow
Network Communications

Satellite and Transmission Services

- Uplinking ■ Downlinking ■ Multiple 11 Meter Antennae
- Local Channel and Microwave Services Linked with
NY — Boston — Chicago — Philadelphia

-
- Five Transponders Available on Satcom IV
 - Post Production Services: 2 CMX 340X Suites
 - Complete with DVE \$250.00 per hour
-

35 North Tyson Avenue, Floral Park, N.Y. 11001
(516) 328-6710 Telex No. 4971560

While all the services satellites can provide to broadcasters is good news, broadcast executives, in general, and service providers, in particular, should understand that the advent of this technology is not without its problems or drawbacks. Looming just over the horizon is the specter of increased federal regulation at the hands of the FCC if satellite networks are irresponsibly operated. Vendors and customers alike need to level with each other about needs and products to meet those needs. Broadcasters should avoid products which are poorly designed and which cause interference or oversaturation of satellites.

With the inauguration of SNG, a service which most vendors believe nearly all broadcasters will utilize in the next three to five years, sound management of transponders and SNG trucks will become increasingly important. Customers of SNG services will need to understand that capacity for Ku-band satellites is limited, particularly in the early and late evening hours when news transmissions will be at their greatest. While signal compression techniques and the availability of small aperture antennas will drive down the costs of SNG in the coming years, the responsibility for assuring sound management and control of scarce space segment will develop into the primary ingredient for successful operation of broadcasting via satellite.

With those notes of caution in mind, there is every reason today to believe that we are well into the age of satellite communications as far as broadcasting is concerned, and that the reliability of the industry on satellite communications will continue to develop over the long term. Quite a contrast to that time only a few short years ago when that tiny but hopeful band of trade journalists searched for and returned disappointed in the broadcast industry's ventures into satellite distribution of programming services.

"Serving the Southwest"

Member, **SatNet**
International Satellite
Distributor Association



SATELLITE RELAY

DISTRIBUTORS

TM

KU-COMPATIBLE?

YES!



KU-compatible RAYDX antenna

Call SATELLITE RELAY for

FREE KU-BAND
INFORMATION PACKAGE!

CA: **1-800-445-1555**

Other: **1-800-458-1555**

RAYDX™
SATELLITE SYSTEMS, LTD.

uniden TRACKER • NORSAT • CHAPARRAL • ELECTROHOME • STS



more

SATELLITE RELAY DISTRIBUTORS

11211 Sorrento Valley Road, San Diego, CA 92121

(619) 458-1000

When You Need to Know...



“The Magazine of the Satellite Broadcasting Industry”

Via Satellite Magazine
7340 E. Caley, Suite 380
Englewood, CO 80111

(303) 779-7940

4th Annual Sat Expo —May 5,6,7—Denver, Colorado

Please send me information on:

___ Exhibiting our product at the show

___ Advance information on attending the show

___ Special advance registration of \$65 (\$95 after March 1st)

___ Bill me ___ Bill my company ___ MC ___ Amex ___ Visa

Account number _____ Expires: _____

COMPANY: _____

NAME: _____

ADDRESS: _____

CITY: _____

PHONE: _____ SIGNATURE: _____

Yes, I would like to receive Via Satellite magazine. Please fill in card completely and sign.

☐ 3 issues FREE (Charter Subscription Offer)

☐ 1 year (12 issues) \$19.95.

☐ 2 years (24 issues) \$34.95

☐ Check Enclosed (Payable to Via Satellite magazine)

☐ Bill Me

Industry Qualification
(Check one only)

04 ☐ Private Cable
05 ☐ MMDS or STV

09 ☐ Satellite Equipment
Distributor/Dealer

15 ☐ Legal/Finance/Insurance
16 ☐ NASA/NASDA/ESA or
other government agency

01 ☐ TV and Radio Broadcasting-06 ☐ Satellite Networks and
Network Operations Facilities Providers

10 ☐ Satellite Carrier
11 ☐ Programming Producer

17 ☐ School/Library/Student
18 ☐ Press

02 ☐ TV and Radio Broadcasting-07 ☐ Teleport Operator
Local Station

12 ☐ Programming Syndicator
13 ☐ Pay-TV Network

19 ☐ Advertising Agency
20 ☐ Other

03 ☐ Cable Television

08 ☐ Satellite Equipment
Manufacturer

14 ☐ Engineering/Consulting

Name _____

Title _____

Company _____

Address _____

City, State, Zip _____

Phone _____

Signature _____

PLACE
STAMP
HERE

1986 SAT EXPO
7340 E. CALEY #320
Englewood, CO
80111



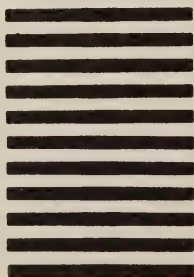
BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 1001 ENGLEWOOD, CO

Postage will be paid by addressee

Via Satellite Magazine
P.O. Box 2220
Englewood, CO
80150

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



1986: Year of Transition

Expert Panels on:

- Encryption
- Teleports
- Ku-Band Technology
- Satellite Security
- Programming
- SNG and Ad Hoc Nets
- Regulatory Issues
- Satellite Insurance

4th ANNUAL MAY 5-6-7
SAT EXPO

DENVER, COLORADO

For More Information: (303) 779-7930

Sheraton/Denver Technological Center

WORLDWIDE COMMERCIAL COMMUNICATIONS SATELLITE MARKET

By Robert T. Filep, Communications 21 Corporation

Filep Story/Jan Via- The worldwide commercial communications satellite market has experienced exciting growth during the past 10 years and is expected to expand at an irregular rate through 2000. This satellite market officially opened in 1965 with the launch of Intelsat I-I and the subsequent voice service at C-band over that satellite.

Setbacks

At the end of 1985, more than 100 commercial satellites had been successfully launched. Eighteen others scheduled for launch did not enter into regular commercial service because of in-orbit or launch failures. Additional satellites are under contract or planned. By the year 2000, as many as 350 communications satellites or equivalents could be launched, reflecting an investment of 24 billion dollars in the space segments alone.

Though the first 21 years of commercial endeavor in space has been active, the communications satellite market over the past year has shown signs of reduced growth. Several announced plans for procurement of satellite systems in 1985 have not materialized. Federal Communications Commission actions in June and July of 1985 culled out applicants who could not demonstrate financial viability or technical capability to place a satellite system in service.

Also, the palor cast over the satellite industry by the high losses and subsequent unclarity of rate structures or availability of insurance funds has

caused and will cause delays in many and the subsequent demise of some proposed satellite systems.

Fiber optic phobia has also been another diversionary activity and has caused investors to take a second look at satellite system market capture scenarios. However, hard data to support the fiber optic systems as a true immediate competitor, as contrasted to a selected transmission vehicle within a total communication system, is still to be presented.

Go Aheads

Conversely, the Commission sanctioned applications for international service in the North Atlantic and points south for new satellite systems. Applications for domestic mobile satellite systems exceeded 10 for the one or two orbital positions that may be available.

Interest by nations in having one's very own satellite still remains high. This is reflected by the technically and politically well-informed delegates at the 161-government-member International Telecommunications Union meeting held in Geneva during August and September of 1985. Delegates more or less agreed to a plan that allows each nation access to at least one guaranteed orbital slot. How this will be implemented on a technical basis will be determined between now and 1988.

From the inception of commercial service through 1985, approximately four billion dollars will have been invested in space segments alone. Approximate launch costs over the same

period were double that figure. These two provide an interesting total of approximately eight billion dollars, on the order of magnitude of expenditures for the Space Station planned for the 90's. The station activity has drawn from the professional talents and internal aerospace industry research funds, which in the past have been involved in satellite developments.

Looking

Growth and opportunity remain as demonstrated by the increased power and frequency options available to system users. Transponder costs are dropping and higher performance earth stations at lower costs are being installed. Coverage, picture quality and superior sound reproduction have all increased.

Figure 1 indicates both a high and low pattern for commercial communication satellites and other commercial and scientific payloads that might share shuttle bays or be on individual expendable launch vehicles, or might share a fairing with a communication satellite. The table in figure 2 outlines specific communication satellite payloads past and planned. Both are derived from a larger study. The 1986 World Satellite Systems Scoreboard and Forecast, conducted by Communications 21 Corporation.

The remainder of the 80's should see brisk activity in the construction and launch of spacecraft worldwide. There are a number of fixed and direct broadcast systems well along in development that are planned for the 80's.

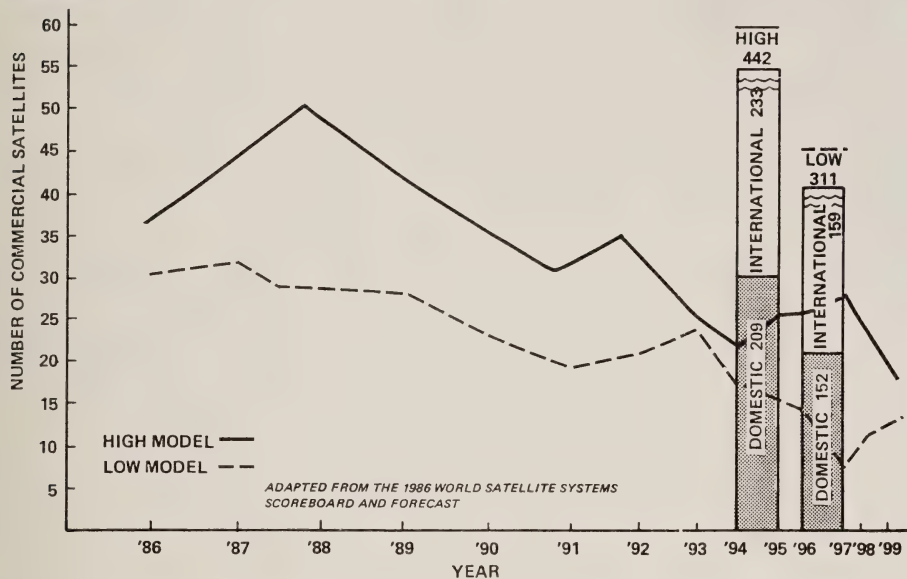


Figure 1 — Commercial and Non-Commercial Satellite Payloads for Launch 1986-1999.

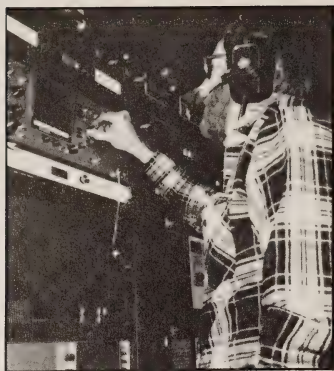
YEARS	NUMBER OF LAUNCHES*	
	HIGH	LOW
1965-1984	82	82
1985-1990	155 (201)	147 (144)
1991-1995	80 (178)	68 (142)
1996-2000	"66" ("54")	"52" ("47")
TOTALS	"383" ("515")	"349" ("415")

*INCLUDES SPARES

ADAPTED FROM THE 1986 WORLD SATELLITE SYSTEMS SCOREBOARD AND FORECAST
() MAY, 1984 FORECAST



Figure 2 — World Commercial Communications Satellites Launches and Potential Launches 1965-2000.



Ed Hart, KCNC TV engineer at the controls of their SNG truck, pictured on page 17. (Both photos by Mary Lou Norman)

Regional News Service via leased transponders on Telstar. Starting in January, CBS will be making a move towards Ku-band, Horner stated, but he declined to go into any detail.

NBC's Skycom

NBC distributes its network programming to its affiliates via Ku-band satellites. As part of this initial set-up, 10 NBC-owned and operated affiliates with permanent news bureaus were equipped with up/downlinks. It is through these initial up/downlinks that NBC will operate its satellite news gathering service, Skycom. Still in the experimental stage, Skycom eventually will consist of 200 plus up/downlinks, 10 permanent up/downlinks and six transportable uplink trucks.

In setting up for its satellite distribution system, NBC prewired 105 downlinks around the country so that a pre-made uplink electronic package could be added to convert the systems. The portable uplink packages (PUPS), made by Harris, have been designed so that the electronics will fit into three suitcases. Two of these suitcases are hung on the antenna and the third is put in the station. NBC plans to install five PUPS a month and will do a total of 50 stations. Ten months after the installation begins this year, NBC will have 60 fixed up/downlinks and six transportable up/downlinks in place. The PUPS can also be moved to different sites at any time with minimal effort.

NBC will be paying for the first 50 PUPS, according to Art Kent, vice president of satellite operations for NBC

News. Beyond that, NBC will examine the need for additional PUPS and the cost involved before committing to additional units. Each NBC affiliate will be responsible for the purchase of its own SNG truck should it want one.

Also on the planning board is a satellite-based communications master control system to permit affiliates to do IFB, communications and coordination through the NBC system. Kent stated that this master control system is what the NBC affiliates felt that they needed to report the news for their viewers. Unlike CBS, Kent added, Skycom will be solely for affiliate use.

Satellite Carrier Services

In addition to full service news networks and network news services, some carriers are offering stations the opportunity to build their own satellite news gathering networks. The stations use the carrier's satellite system to feed stories to other stations but the stations themselves control their own news gathering systems.

GTE News Express

When News Express became available in the spring of 1985, four Florida broadcast stations formed a consortium called the Florida News Network (FNN). The initial stations were located in Jacksonville, Tampa/St. Petersburg, Miami and Orlando. Setting up a news gathering service between them, they leased occasional transponder capacity on GTE's Spacenet II. FNN uses SNG trucks manufactured by Dalsat and fixed receive-only terminals.

The stations involved in FNN wanted to reduce the costs associated with news gathering by going with a network concept. The idea worked so well that FNN has expanded considerably beyond its original four stations and now includes several network affiliate stations and independent stations.

Most of News Express' customers are located along the Gulf Coast with others in the Midwestern states. As of this month, 29 stations will be using News Express, according to Susan Kalla, GTE News Express.

Cost for the service (occasional video with voice currents) runs \$680/hour for a one year, 50 hour contract;

\$670/hour for a one year, 100 hour contract; and \$640/hour for a two year, 250 hour contract.

Three features that make News Express attractive, according to Dave Thompson, public affairs officer, are: mobility, flexibility and cost advantages.

Comsat's Skybridge

Comsat General is in the process of finalizing its SNG service, Skybridge, which will include an SNG truck designed by Comsat and the space segment (video and voice communications) for the service. An operations center for Skybridge is already in place, stated Art Hill, marketing manager for Comsat General. Comsat is targeting its service to network affiliates and also to stations that already have an SNG truck.

Cost for the service has not been determined yet. But Hill says that the company is looking at a per minute charge with a minimum time. The service is expected to be introduced within the first quarter of this year.

Summary

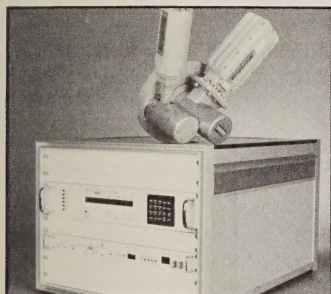
The SNG service offerings can be confusing. Broadcast stations need to take the time to determine what their specific needs are and which type of service (full, network or carrier) will fit those needs the best.

One problem all of the services have now is that of transponder grid lock. There is only so much space available and most stations now using SNG services have experienced problems getting transponder space at prime hours of the day. Comsat Labs is working on a possible solution to this problem. They are experimenting with analog compression that would allow four feeds per transponder. Digital compression has been tried but the results were not satisfactory. Other companies, like GE, Colorado Video and Thomson CSF have developed video multiplexers.

Once again we see that further use of satellite communications technology is opening the way for research into better services and possibly even new services not yet foreseen. The time may come when these SNG companies are considered the pioneers of future satellite communications services.

Automated Earth Station: Microdyne

Microdyne Corp. has announced the availability of M.A.T. (Microdyne Automated Terminal). Designed for total compatibility with all domestic commercial satellite transmission formats, M.A.T. is the first fully automated satellite terminal.



Through the use of a simplified key pad, users tell M.A.T. which satellite, channel and receive format to tune and when to go on to the next selection. A diverse selection of network specific formatted programming such as AMCEE, NBC, NTU and other Ku-band services to standard format programs such as CNN, C-Span, ESPN and other C-band services are within seconds of the operators' command.

M.A.T. system features include: selectable C-band/Ku-band feed, full or half transponder reception, programmable audio, up to 96 programmable satellite positions, real time clock with two week span, RS232 and parallel ports for remote control and self diagnostic routine for controller fault detection.

Each M.A.T. system includes the following equipment: 12-foot motorized antenna (five- or seven-meter antenna optional), Microdyne combination C-band/Ku-band feed system, Ku-band 225 degree LNC, C-band 85 degree LNC, Microdyne 1100 HDR combination C-band/Ku-band satellite receiver, programmable audio subcarrier demodulator, Microdyne microprocessor controller complete with internal user-friendly software and pre-wired equipment console.

Microdyne Corp., P.O. Box 7213, Silver Springs Shores Industrial Park, Ocala, FL 32672-0213, 904-687-4633.

Stereo Modulator: Wegener

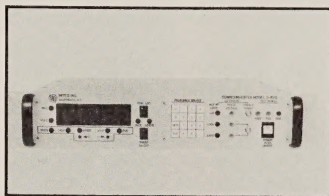
Wegener Communications has introduced the Series 1971 TV Broadcast Standard stereo modulator. The Series 1971 generates a broadcast stereo signal as specified in the U.S. Multichannel Sound Standrad at the cable headend to integrate television stereo audio into the cable network. Outputs at 4.50 MHz RF and at baseband audio are available.

The Series 1971 accepts left and right channel audio inputs directly from Wegener Series 1600 dual demodulators or from a local stereo audio source. Dual five-step LED indicators accurately display audio levels for precise level control. The system features excellent stereo separation and frequency response and provides simultaneous TV stereo and FM band stereo simulcast capability.

Wegener Communications Inc., 150 Technology Park/Atlanta, Norcross, GA 30092, 404-448-7288.

Converters: Miteq

Miteq's D-9200 and U-9250 series of communication downconverters and upconverters are frequency synthesized units offering both local and remote GPIB488 frequency control. Frequency step size is 125 KHz minimum.



Fixed frequencies can be programmed into memory for rapid recall. Standard options include alarm status on the remote GPIB488 buss and automatic sweep with programmable frequency step size and dwell time.

Miteq Inc., 125 Ricefield Lane, Hauppauge, NY 11788, 516-543-8873.

CLASSIFIEDS

SINCE 1952

MSI

Tel. 201-627-7400

MICROWAVE SERVICES INTERNATIONAL, INC.

SATELLITE AND TERRESTRIAL SYSTEMS
CONSULTANTS • ENGINEERS • CONSTRUCTORS
FREQUENCY COORDINATORS

VICTOR J. NEXON, PE
PRESIDENT

266 W. MAIN ST.
DENVILLE, NJ 07834

Member Association
Federal Communications
Consulting Engineers

TRAFFIC MANAGER POSITION

Traffic Manager for progressive uplink, common carrier facility in a major midwest market. Experience required. Video production background preferred. Send resumes to:

Personnel Manager
Via Satellite Magazine
P.O. Box 2220
Englewood, CO 80150

BRIGHT STAR

NUMBER ONE ACROSS THE ATLANTIC

The BrightStar transatlantic satellite path is the only two-way link capable of connecting to any North American earth station with London the European gateway.

NUMBER ONE IN QUALITY

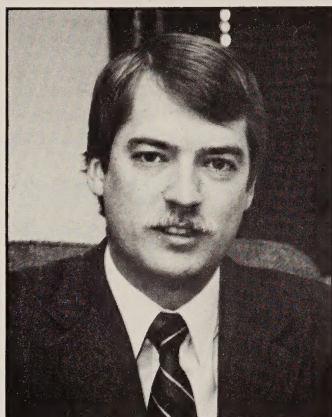
BrightStar meets the rigorous specifications for international audio and video transmissions of all our regular users who include the BBC, CBC (Canada), CNN (USA), EUROPEAN BROADCASTING UNION, ITN (UK), LWT (UK), MTV (Canada), NBC, NHK (Japan), NEWSWEEK (USA), PARAMOUNT (USA), RTE (Eire), THAMES TV (UK) and many others.

NUMBER ONE IN EXPERIENCE

BrightStar is operated by people with 20 years experience of transmitting video by international satellites and using European interconnects - soon to include the European Communications Satellites.

EDITORIAL

KU-BAND OPENS BROADCASTING ERA



Irl Marshall
Publisher

The Ku-band broadcasting has begun! With the launch of RCA Americom's K-2 and K-1 satellites, a new type of Ku-band capability is on orbit. K-2 and K-1 have travelling wave tube amplifiers of 45 Watts powering their transponders. 32 transponders of broadcasting strength are on-orbit over North America.

The engineers say that these satellites can broadcast to earth stations of one meter in size. Given technological advances and non-strict adherence to broadcast standards, we will see antennas much smaller than that.

In order for the satellite broadcasting to occur, there needs to be many earth stations in place. At C-band there are over a million such earth stations, but at Ku-band there are only thousands. This will not last for long.

RCA, as part of its syndicated program distribution package, has been giving away Ku-band earth stations to broadcast television stations and others.

Other pressures will come to bear to increase the Ku-band universe. We will see the same private earth station phenomenon (as that) we saw at the C-band. Once there is video and audio programming consolidated on a higher power Ku-band satellite, consumers will pay money for the hardware to watch it. Only this time it will occur faster. The consumer is aware of satellite programming and the hardware distributor and dealer infrastructure is already in place. There will be less consumer education necessary and there are businesses ready to sell the product.

We will see encryption on the Ku-band satellites, but we will also see decoders built into the new Ku-band receivers. Program purchases and decoder authorization will be but a phone call and payment away.

The future of the industry is bright. RCA Americom has taken a bold first step. On the horizon lies the prospect of even higher-power DBS satellites from Hughes, DBSC, USSB, and others. It will be fascinating to watch this industry as it develops and through these pages to comment on its development.

Irl Marshall

**BrightStar is first across the
Atlantic - don't be the last
to find out**

BrightStar, International Building, Rockefeller Center, 630
5th Avenue, 22nd Floor, New York NY 10111.
Telephone: (212) 582 8578, Telex: 642494 WU BRTSTR NY

SOURCES

Ku-band Study Completed

Direct Broadcast Satellite Association (DBSA) has released a new report entitled: Advanced Ku-Band Television Systems: A Comprehensive Evaluation. This report offers complete technical information, performance data and additional analysis of the General Instrument and Scientific-Atlanta Ku-band DBS television systems. Both composite (NTSC and B-NTSC) and component (B-MAC) systems are being tested. The complete report was expected to be released last month.

For further information, contact: Mariann Babnis, DBSA, 1800 M St., NW, Ste. 400, Washington, DC 20036-5873, 202-332-6551.

Market Opportunities Explored

International Resource Development, Inc. has just completed Telecommuni-

cations Market Opportunities which surveys the telecommunications marketplace in depth. More than 40 market segments are analyzed, with assessments of current market size, market growth over the next 10 years and the competitive environment for established and new suppliers. Some of the topics addressed are: telecommunications industry structure, microwave markets, fiber optic markets, satellite markets, teleconferencing, teleports and ISDN.

The report (#676) costs \$4500.00. Contact International Resource Development Inc., 6 Prowitt St., Norwalk, CT 06855, 203-866-7800.

Downlink Directory Available

The Downlink Directory, a guide to locations in the United States capable of hosting video teleconferences, has been published by Virginia A. Osten-

dorf, Inc., a Littleton, CO company. The Downlink Directory is a 294-page book presenting up-to-date information on more than 1700 downlink sites for meeting planners and video producers.

Sections of the book include permanent facilities as well as those who provide transportable earth stations for video events. Listings are grouped under C-band or Ku-band and by state and city. A list of networks and agents is also included. Detailed information is provided on the major hotel chains who offer teleconferencing services including Hilton, Holiday Inn, Hyatt and Marriott.

The Downlink Directory sells for \$125.00 in the United States and Canada; \$150.00 elsewhere. All orders must be pre-paid. For more information, contact: Virginia A. Ostendorf, Inc., P. O. Box 2896, Littleton, CO 80161-2896, 303-797-3131.

CONTRACTS

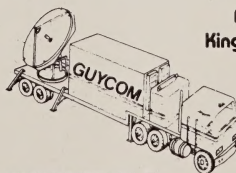
M/A-COM Telecommunications Division has been awarded a contract by Hewlett-Packard for an X.25 packet switching network to be used throughout HP's facilities and sales offices worldwide. The M/A-COM network will consolidate traffic from HP's applications, including order processing, electronic mail, financial systems and engineering workstation-to-workstation communications.

The launch contract for Luxembourg's first television satellite has been signed by Societe Europeenne des Satellites (S.E.S.) and Arianespace. The S.E.S. satellite, being built by RCA Astro-Electronics, is scheduled to be launched in April or May of 1987 from the Guiana Space Center in Kourou, French Guiana aboard an Ariane 4 rocket. The satellite will have 16 television channels and will be placed into an orbital slot at 19 degrees East.

The board of directors of Satellite Syndicated Systems, Inc. recently voted to change the company's quarterly cash dividend policy from three cents to 3.5 cents per share increasing annual dividends to 14 cents per share. The new dividend policy will commence with the fourth quarter of 1985 payable on January 15, 1986 to all shareholders of record as of December 31, 1985.

The French Post and Telecommunications Ministry has ratified the launch contract for Telecom 1C with Arianespace. Telecom 1C is the third satellite to be built for the Telecom 1 program. Telecom 1C, built by Matra, will be launched from the Guiana Space Center in Kourou, French Guiana by an Ariane 3 rocket. Telecom 1C will be located at three degrees East.

Guy Communications Co., Inc.



TRANSPORTABLE
UPLINK SERVICE

P.O. Box 5565 • 1310 Kingwood Dr.
Kingwood, Texas 77339 • (713) 358-6862

Satellite Time
Networking Services
Nationwide

10% Commission to Brokers



Comtech's Full Offset Antenna



The Field Proven, Licensable Antenna.

The Comtech "Offsat" is a unique one-piece antenna design with an innovative full offset feed. The "Offsat" is a small antenna that exceeds all FCC specifications for 2° spacing. It is the intelligent response to the FCC's new stricter sidelobe requirements.

This fresh approach to the 2° spacing dilemma has one important advance over competitive systems: It works now and will work in the future—you can install the "Offsat" today and be set for tomorrow.

The idea is simple. The width of 5.5 meters creates the very narrow beamwidth necessary to meet and exceed the 1983



FCC regulations. A reflector height of 2.4 meters allows for easy, one-piece shipping. The full offset feed assures zero signal blockage and totally eliminates feed support reflections.

The "Offsat" is available for uplink and downlink applications in El/Az, polar and transportable configurations.

This range-tested licensable transmit/receive antenna is ideally suited for SCPC, data and video transmit requirements. Find out more by contacting COMTECH ANTENNA CORPORATION at 3100 Communications Road, St. Cloud, Florida 32769 (305-892-6111)

TAKING THE LEAD IN SATELLITE ANTENNA SYSTEMS

COMTECH Antenna Corporation A subsidiary of Comtech, Inc.